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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Examiner	:	Roberts P. Culbert
Group Art Unit	:	1763
Appellants	:	Gregory S. Marczak et al
Serial No.	:	09/899,591
Filed	:	July 5, 2001
Attorney Docket No.	:	22053.75038-001
For	:	ANODIZED ALUMINUM ETCHING PROCESS AND RELATED APPARATUS

MS APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF TO THE SUPPLEMENTAL EXAMINER'S ANSWER

In reply to the Examiners' Answer mailed January 25, 2005, the shortened statutory period for reply being until March 25, 2005, Appellants submit this Reply Brief.

In general, the Examiners have argued that the positions taken by the Appellants in the Appeal brief are incorrect and have submitted their reasoning in support of this position. Appellants respectfully submit that it is the Examiners' position and reasoning are erroneous. Rather than reiterate all the arguments presented in the Brief, Appellants refer below to those portions of the Brief that are relevant to the Examiners' positions. Where helpful below, Appellants expand upon their rebuttal. In general, the Examiners' positions are addressed in order in which they are presented in the Answer.

To begin, the Examiners have erroneously construed the teachings of Arrowsmith and Schneeberger with respect to the sealing feature in their Answer at Pg. 2, Ln. 23 through Pg. 3, Ln. 24. First, referring to Pgs. 6 and 8-10 of the Appeal Brief, the position taken by the Appellants is not that Arrowsmith anodic layer is merely "corrosion resistant", but that it is "environmentally stable and unaffected by the presence of water. [Arrowsmith] Col. 2, Lns. 59-

64." Appellants' Brief, Pg. 6, Lns. 21-22. The difference is that the language provided in Arrowsmith provides that the anodic layer alone is a complete product that needs no further processing; it is completely stable by itself—not merely "resistant" to corrosion.

Second, the Examiners argue that the Schneeberger anodic "layer is resistant to corrosion, not prone to corrosion as argued by the Appellants." This position is erroneous. Referring to the citation provided by the Examiners—Schneeberger, Col. 1, Lns. 11-16 and 33-43—although Schneeberger states that its anodic layer improves corrosion resistance, Schneeberger clearly states that the layer does "not offer sufficient corrosion protection" and that the anodic layer "has to be sealed." In sharp contrast to Arrowsmith, Schneeberger is unstable, and necessarily requires additional processing to become environmentally stable.

Third, the Examiners argue that the anodic layer of Arrowsmith is the same as that of Schneeberger, primarily because the two are produced using H_2SO_4, are of similar thickness, and are produced under "very similar conditions (time temperature and current density)." This position is erroneous. It is evident that the conditions are *not* similar. The table below illustrates the differences in the conditions alleged to be "very similar" by the Examiners, relying on the same citations as the Examiners, that is, Arrowsmith "Experimental Procedure" and Schneeberger, Col. 3, Lns. 17-30.

	Temperature	Time	Current Density
Arrowsmith	-5° C	28-30 minutes	2 A/dm^2
Schneeberger	20° C	40 minutes	1.5 A/dm^2
Difference	*25° C*	*25%*	*25%*

In summary, there is no motivation to attempt to modify the already complete and stable Arrowsmith anodic layer with the sealing process of Schneeberger, which is designed specifically for different, inferior anodic layers.

Next, the Examiners have erroneously construed the teachings of Arrowsmith with respect to its requirement that parts must be dipped in the Arrowsmith process in their Answer at Pg. 4, Lns. 1-16. In reference to the Brief at Pgs. 11-12, simply put, it is error to assert that Arrowsmith (a) does not require controlled dipping, or (b) does not teach against other treatment methods, when it explicitly provides "[t]he *main feature of this invention is a controlled dip* in a solution containing phosphoric acid in order to develop an outer surface of the alumina with a tailored topography. . ." Arrowsmith, Col. 3, Lns. 38-45. It is inconceivable how this statement cannot be understood by one of skill in the art to mean: "use controlled dip for this process to work." There is no motivation for one to look to, or even contemplate other methods in view of this statement.

Further, with regard to the Examiners' reliance on Arrowsmith, Col. 5, Lns. 15-24, this citation provides that modifications can be made to the example, provided the modifications fall "within the scope of the invention described in the specification," that is, provided the modifications encompass the main feature of controlled dipping as emphasized repeatedly in the specification as noted in the Brief. The other references, including Shepard, add nothing to, nor negate the importance of using controlled dipping in the Arrowsmith process.

Additionally, the Examiners have apparently failed to comprehend the Appellants' Brief in their Answer at Pg. 4, Ln. 17 through Pg. 5, Ln. 13. First, the Examiners reference Pg. 7, Ln. 13 through Pg. 8, Ln. 6 of the Appellants' Brief for the issue of "an identification of a desired result of applying an etching composition to one side of an aluminum sheet or web." This portion of the Brief does not address this issue; however, the Brief at Pg. 11, Ln. 6 through Pg. 12, Ln. 6 does address this issue. The Examiners apparently believe that the

Appellants have not challenged the Examiners' conclusion that it would be obvious to apply the method of the Arrowsmith references to a continuous web to provide commercially produced aluminum with a surface that will strongly adhere to coatings, or the application to one side of the web. To the contrary, these rejections are addressed in the Brief at Pg. 12, Lns. 16-21. There, the Appellants point out that the Examiners merely identify *a need* to have a bonding surface on only one side of an aluminum surface, and then rely on that need for their basis that the present invention is obvious. Indeed, as provided in more detail in the Brief, and relied upon here, the Examiners' conclusion that there was a need for such commercial aluminum—without an identification of how this need was identified, let alone resolved by the prior art—reinforces the need that the present invention fulfills, and its subsequent patentability. In other words, the Examiners apparently admit there *was* a long felt need for the present invention. At most, the Examiners have impermissibly used the Appellants' specification as a roadmap for hindsight reconstruction to meet the unmet need (for a continuous web including a bonding surface on only one side) as identified by the Examiners.

Further, the Examiners have erroneously construed the teachings of Arrowsmith with respect to its requirement that all surfaces of aluminum are treated under a controlled dip process in their Answer at Pg. 5, Lns. 20 through Pg. 6, Ln. 9. The Examiners allege that "controlled dip" suggests that only a portion of aluminum desired to have a bonding surface is immersed, relying on Arrowsmith, Col. 1, Lns. 25-40. Neither this citation, nor anything in Arrowsmith, supports such an unconventional definition. For example, the citation relied upon merely states that the durability of adhesive joints in aircraft is important, and that such joints are exposed to a variety of conditions. In no way does this suggest that a specific part is not dipped

as a whole so that all surfaces are treated. Indeed, this citation mentions nothing of the Arrowsmith process; it is merely a statement of the importance of good joints *before the invention* of Arrowsmith. Further, Arrowsmith teaches against any treatment other than a controlled dip of the entire part to treat all surfaces as explained in the Brief at Pg. 14, Lns. 1-25.

The Examiners also allege in their Answer that "if all areas were contacted, there could be no localized treatment (i.e., treatment in a local area)." As explained in the Brief at Pg. 14, all local areas can be treated by complete dipping of all surfaces of the part into the solution of Arrowsmith. Further, "localized area" can mean an area corresponding to a complete part, which itself is entirely dipped in the Arrowsmith solution. Finally, the Examiners state that hand application refers to a brushing, rolling, spraying and other known hand application treatments. There is nothing in Arrowsmith to support this definition, and if it is maintained, Appellants requests that it be supported by prior art or an affidavit under 37 CFR 1.104(d).

Next, the Examiners have erroneously construed the teachings of Berdan with respect to its disclosure of an etching solution contacting the second side of aluminum foil in their Answer at Pg. 6, 10-18. The Examiners have neglected the relevant claim language, which provides that solution is "prevented from *contacting* the second anodized surface" (claim 30)—not preventing *etching* of that surface. As explained in more detail in the Brief at Pg. 15, the Berdan etchant *must contact* all surfaces of the foil because it is completely immersed in the etchant. By definition, Berdan cannot "prevent contact" of the web with the etchant via fluids because complete contact occurs *before* the fluids are even applied to the web.

Finally, the Examiners have erroneously construed the teachings of Frantzen with respect to its disclosure of an etching solution contacting the second side despite the use of a

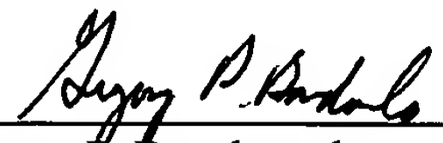
metal shield in their Answer at Pg. 6, Ln. 18 through Pg. 7, Ln. 4. The Examiners allege that Frantzen teaches preventing etching solution from contacting a second surface with a shield, because when Frantzen begins boring a bole completely through a metal sheet, the solution is not contacting the second side. This position is erroneous. First, Frantzen necessarily teaches that its invention is to bore openings completely through the metal web. Frantzen, Col. 1, Lns. 62-68. Thus, inevitably, the etching solution contacts the second side despite the shield being present. The shield never prevents this contact—if it did, the openings that Frantzen requires would never be created. Further, even under the strained interpretation of the Examiners, the shield is not "preventing" contact of the solution with the second side as the opening is beginning to be bored—it is the thickness of the web itself that prevents the contact of the etchant with the second side.

In conclusion, Appellants continue to maintain that the Examiners' rejection of the claims are improper and should be withdrawn.

Respectfully submitted,

GREGORY S. MARCZAK ET AL

By: Warner Norcross & Judd LLP



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CERTIFICATE OF MAILING

I hereby certify that the attached Reply Brief to the Supplemental Examiner's Answer (in triplicate) is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

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on March 16, 2005.

Respectfully submitted,

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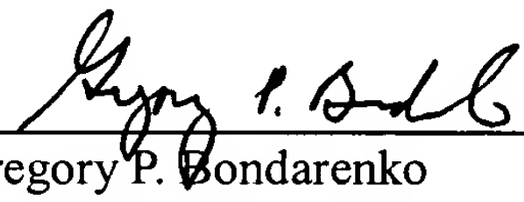

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